

Claims:

According to Examiner's requirements based on the Attached Sheet in the Advisory Action Before the Filing of an Appeal Brief mailed on July 17, applicant has cancelled the claims 24, 33-45, and currently amended the claims 25-32 and 46 as follows.

Claim 24 (cancelled)

Claim 25 (currently amended): A ~~[[The]]~~ spread spectrum based multichannel ~~modulation~~ Ultra Wideband (UWB) communication transceiver of claim 24 wherein said system having a multichannel pseudorandom noise (PN) sequence mapping, includes said multichannel PN sequence mapping further comprising: N-1 delay units coupled to N downsampling units followed by N Exclusive OR (XOR) units in parallel, and said N XOR units connected to ~~[[the]]~~ a PN sequence look-up table, where N is an integer and greater than 1.

Claim 26 (currently amended): The spread spectrum based multichannel ~~modulation~~ UWB communication ~~transceiver system~~ of claim 25 wherein said N XOR units can be controlled to spread ~~[[N]]~~ Q symbols in parallel with L PN chips from the PN sequence look-up table, where N, Q and L are integers, N and Q is greater than 1, and L is greater and equal to 1.

Claim 27 (currently amended): The spread spectrum based multichannel ~~modulation~~ UWB communication ~~transceiver system~~ of claim 25 wherein said multichannel PN sequence mapping is used to form N UWB multichannel signals in parallel, where N is an integer and greater than 1.

Claim 28 (currently amended): The spread spectrum based multichannel ~~modulation~~ UWB communication ~~transceiver~~ system of claim 27 wherein ~~[[said]]~~ each of the N UWB multichannel signals has a chip data rate of 650 Mcps approximately, where N is an integer and greater than 1.

Claim 29 (currently amended): The spread spectrum based multichannel ~~modulation~~ UWB communication ~~transceiver~~ system of claim ~~[[24]]~~ 26 wherein ~~said PN sequence look-up table contains M orthogonal spreading sequences that are used to spread the N UWB multichannel signals, where M and N are integers~~ each of said N XOR units is programmable, where N is an integer and greater than 1.

Claim 30 (currently amended): The spread spectrum based multichannel ~~modulation~~ UWB communication ~~transceiver~~ system of claim ~~[[29]]~~ 27 wherein each of said N UWB multichannel signals are orthogonal to each other can be turn on or off by using a switch, where N is an integer and greater than 1.

Claim 31 (currently mended): The spread spectrum based multichannel ~~modulation~~ UWB communication ~~transceiver~~ system of claim ~~[[24]]~~ 28 wherein ~~said multichannel PN sequence mapping can produce the same operation results by using an alternative system including:~~

~~a switch;~~

~~N XOR units;~~

~~said N XOR units connected to the PN sequence look-up table;~~

~~said switch can be controlled to connect with said N XOR in a clockwise direction of rotational uniform speed~~
N UWB multichannel signals have a total chip data rate of 650N Mcps approximately, where N is an integer and greater than 1.

Claim 32 (currently amended): The spread spectrum based multichannel ~~modulation~~ UWB communication ~~transceiver system~~ of claim ~~[[31]]~~ 27 wherein said multichannel PN sequence mapping produces a scalability data rate ~~by controlling said switch and/or said PN sequence look-up table~~ in a step of increasing or decreasing 650 Mcps approximately.

Claims 33-45 (cancelled)

Claim 46 (currently amended): ~~The spread spectrum based~~ A multichannel modulation Ultra Wideband (UWB) communication receiver ~~of claim 40 wherein said~~ having a dispreading for a pseudorandom noise (PN) sequence and demapping that produces an UWB symbol rate at ~~446.875~~ 446 Msps approximately.